

AMENDMENTS TO THE CLAIMS

1. (Currently amended) An insulating adhesive tape comprising:
 - 5 an embossed reinforcing polymer layer, the embossed reinforcing polymer layer comprising a top face and bottom face, the embossed reinforcing polymer layer being treated with a flexibility and tearing characteristics enhancing means impressed using an impressing process;
 - 10 a first flexible layer, the first flexible layer covering and the top face of the embossed reinforcing polymer layer cohere and the first flexible layer is softer than the embossed reinforcing polymer layer being used to improve the flexibility of the insulating adhesive tape; and
 - 15 an adhesive layer, the adhesive layer covering the bottom face of the embossed reinforcing polymer layer and being used to adhere the insulating adhesive tape to an object.
2. (Currently amended) The insulating adhesive tape of claim 1 wherein the embossed reinforcing polymer layer is composed of made of material selected from a group consisting of unhalogenated polymer materials, the unhalogenated polymer materials comprising poly(ethylene terephthalate) (PET), polyethylene naphthalate (PEN),
20 polypropylene (PP), or and polyimide (PI).
3. (Currently amended) The insulating adhesive tape of claim 1 wherein the draw ratio of the first flexible layer at 20°C is below 400% the first flexible layer has a draw ratio of below 400% at 20°C.
- 25 4. (Currently amended) The insulating adhesive tape of claim 3 wherein the first flexible layer is composed of made of flexible polymer materials, the flexible polymer materials comprising selected from a group consisting of polyethylene (PE), acrylic, polyurethane resin (PU resin), ethylene vinyl acetate (EVA), or and Surlyn™.
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5. (Currently amended) The insulating adhesive tape of claim 1 wherein the impressing process is used to flexibility and tearing characteristics enhancing means comprises a step of forming a plurality of pores that are randomly distributed throughout the embossed reinforcing polymer layer so as to enhance the flexibility of the embossed reinforcing polymer layer.
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6. (Currently amended) The insulating adhesive tape of claim 5 wherein after the impressing process treated with the flexibility and tearing characteristics enhancing means, a surface pretreatment process is performed on the top face of the embossed reinforcing polymer layer to improve the increase affinity of the top face of the embossed reinforcing polymer layer for to the first flexible layer.
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7. (Currently amended) The insulating adhesive tape of claim 6 wherein the surface pretreatment process is performed using a method selected from a group consisting of corona discharge technique, a-flame burning technique, or a and primer.
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8. (Currently amended) The insulating adhesive tape of claim 1 further comprising a second flexible layer ~~or interposed between~~ the embossed reinforcing polymer layer and the first flexible layer, the second flexible layer being used to increase both the flexibility and the thickness of the insulating adhesive tape.
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9. (Original) The insulating adhesive tape of claim 8 wherein the draw ratio of the second flexible layer at 20°C is below 400%.
- 10 10. (Currently amended) The insulating adhesive tape of claim 9 wherein the second flexible layer is ~~composed of~~ made of flexible polymer materials, ~~the flexible polymer materials comprising selected from a group consisting of~~ polyethylene (PE), acrylic, polyurethane resin (PU resin), ethylene vinyl acetate (EVA), or and Surlyn™.
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11. (Currently amended) The insulating adhesive tape of claim 8 wherein ~~the first flexible layer and the embossed reinforcing polymer layer are impressed using the impressing process to form a plurality of pores that are randomly distributed throughout both the first flexible layer and the embossed reinforcing polymer layer so as to enhance the flexibility of the insulating adhesive tape.~~
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12. (Currently amended) The insulating adhesive tape of claim 8 wherein the second flexible layer and the embossed reinforcing polymer layer are ~~impressed~~ milled using the ~~impressing and rolling~~ process to form a plurality of pores that are randomly distributed throughout both the second flexible layer and the embossed reinforcing polymer layer so as to enhance the flexibility of the insulating adhesive tape.
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13. (Currently amended) The insulating adhesive tape of claim 1 further comprising a release liner that is ~~situated on adjacent to~~ the adhesive layer to maintain the adhesion feature of the adhesive layer.
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14. (Currently amended) The insulating adhesive tape of claim 1 further comprising a release agent coating that covers the first flexible layer; wherein the adhesive layer of the insulating adhesive tape will be ~~adjacent to~~ in contact with the release agent coating when the insulating adhesive tape is rolled up.
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15. (Currently amended) The insulating adhesive tape of claim 1 further comprising a electrically conductive layer ~~that is used to prevent electro-magnetic wave interference (EMI) effects.~~
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16. (Currently amended) The insulating adhesive tape of claim 15 wherein the electrically conductive layer is ~~composed of metallic~~ made of materials, ~~the electrically conductive materials comprising selected from a group consisting of~~ aluminum, copper, tin, silver, zinc, iron, alloy, or and electrically conductive polymers.
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17. (Currently amended) The insulating adhesive tape of claim 16 15 wherein the electrically conductive layer is formed by using a metal vapor deposition technique or a thermal-laminated technique.
- 5 18. The insulating adhesive tape of claim 17 further comprising a release agent coating that covers the electrically conductive layer; wherein the adhesive layer of the insulating adhesive tape will be adjacent to in contact with the release agent coating when the insulating adhesive tape is rolled up.

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